CONTENTS

Hydrogen bonding between free fluoride ions and water molecules: two X-ray structures
J. Emsley, M. Arif, P.A. Bates and M.B. Hursthouse (London, Gt. Britain) 1
Crystal structure of betaine monohydrate, $(CH_3)_3NCH_2COO \cdot H_2O$
T.C.W. Mak (New Territories, Hong Kong) 13
On the molecular and crystal structure of cyclo(L-methionyl-L-methionyl)
G. Valle and V. Guantieri (Padua, Italy) and A.M. Tamburro (Potenza, Italy) 19
Electronic spectra of adenine: interaction with dissolved oxygen in solution, oscillation and intensification of n–n^* transition
C. Santhosh and P.C. Mishra (Varanasi, India) 25
Hydrogen bonding in 3-azetidinol, Part 2. On the presence of inter- and intra-molecular interactions in solution and in the gas phase
U. Anthoni, D.H. Christensen, C. Christophersen, M. Gajhede, L. Henriksen, O.F. Nielsen and P.H. Nielsen (Copenhagen, Denmark) 43
Synthesis and structural study of tropane benzamides. Part IV. *N*-(8-Alkyl(or aralkyl) nortropan-3-β-yl)-3,4,5-trimethoxybenzamides
E. Galvez, M.S. Arias, N. Cabezas and M. Martinez (Madrid, Spain) 55
An answer to the SPIRO versus ANSA dilemma in cyclophosphazenes Part XIII*. Synthesis and crystal structure of the first di-MACROSPIRO and di-MEGASPIRO species from di- and tri-oxodiamines
F. Sournies, A. El Bakili, B. Zanin and J.-F. Labarre (Toulouse, France) 63
Gas electron diffraction study on the molecular structure of cesium iodide at a high temperature using a fined intensity formula
H. Miki, S. Kodera and T. Ino (Osaka, Japan) 79
The coordination geometry of the lanthanide chelates with 1-(2-pyridylazo)-2-naphthol
P.M. Drozdzewski (Wroclaw, Poland) 95
Microwave spectrum, structure and nuclear quadrupole coupling constant tensor of ethyl chloride and vinyl chloride
M. Hayashi and T. Inagusa (Hiroshima, Japan) 103
Raman spectroscopic studies of polymorphic N_2H_7I. Phase transition, orientational disorder and hydrogen bonding
H.D. Lutz, E. Alici and J. Henning (Siegen, F.R.G.), H.J. Berthold and E. Vonholdt (Hannover, F.R.G.) 119
A Raman spectroscopic and differential scanning calorimetric study of the different crystalline phases of guaiacol
H. Tylli, H. Konschin and H. Tenhu (Helsinki, Finland) 129
The resonance Raman effect of some metallodithiocroconates
P.S. Santos (São Paulo, Brazil) 137
Ab initio, CNDO/2 and matrix isolation studies of 2-hydroxypyrimidine infrared absorption spectra
L. Lapinski, R. Czerminski, M.J. Nowak and J. Fulara (Warsaw, Poland) 147
Vibrational spectra and rotational isomerism of ethyl chloroacetate and three deuterated analogues
Y. Mido and N. Kakizawa (Kobe, Japan), H. Matsuura (Hiroshima, Japan), M.A. Raso, M.V. Garcia and J. Morcillo (Madrid, Spain) 169
The molecular structure of pyridazine, determined from electron-diffraction and microwave data in the gas phase and direct dipolar couplings in the 1H-NMR spectrum in a liquid-crystal solvent
S. Cradock, C. Purves and D.W.H. Rankin (Edinburgh, Gt. Britain) 193
The molecular structure of chlorobenzene, determined by the combined analysis of electron diffraction, rotation constant and liquid crystal nuclear magnetic resonance data
S. Cradock, J.M. Muir and D.W.H. Rankin (Edinburgh, Gt. Britain) 205

A quantitative Raman spectroscopic study of hydrogen-bonding in methanol and methanol-d_1
H.G.M. Edwards and D.W. Farwell (Bradford, Gt. Britain) 217
A quantitative Raman spectroscopic study of molecular association in liquid boron(III) chloride
H.G.M. Edwards, V. Fawcett and G.P.J. Price 227
Laser-induced photochemical trimerization of hydrogen cyanide
H.G.M. Edwards (Bradford, Gt. Britain) 235
Conformation of cyclic polysilane in the solid state as studied by variable-temperature ^{29}Si CP/MAS NMR
T. Takayama (Yokohama, Japan), S. Ando and I. Ando (Tokyo, Japan) 243
Side-chain conformation and ^{13}C-NMR chemical shift of poly(L-phenylalanine) and oligopeptides containing L-phenyl-alanine and tyrosine residues in the solid state
H. Miyamoto, T. Komoto, H. Kurosu and I. Ando (Tokyo, Japan), T. Ozaki and A. Shoji (Gunma, Japan) 251
^1H NMR studies of gossypol and its complexes with some organic compounds
B. Brzezinski, J. Olejnik, S. Paszyc and T.F. Aripov (Poznan, Poland) 261
Conformational structures and energies, rotational barrier heights and torsional oscillations in tetrahalodiphosphines, tetrahalohydrazines and $X_2N–PX_2$ molecules
R. Stølevik and P. Bakken (Dragvoll, Norway) 269
On the problem of determination of the sign of the dipole moment derivative in normal coordinates: HCN
W.B. de Almeida, J.S. Craw and A. Hinchliffe (Manchester, Gt. Britain) 279
Calculation of internal valence force constants for $XY_6(O_h)$ octahedral molecules
M. Fernandez-Gomez and J.J. Lopez-Gonzalez (Jaen, Spain) and A.C. Espinosa (Granada, Spain) 287
Calculation of absorption band frequencies and intensities in the IR spectrum of α-D-glucose in a cluster
M.V. Korolevich, R.G. Zhbankov and V.V. Sivchik (Minsk, U.S.S.R.) 301

Short communications
UVPES of some aliphatic azides. Part II
M.L. Costa, B.J. Costa Cabral and M.A. Almoster Ferreira (Lisbon, Portugal) 315
Comment on the geometries of *cis* and *trans* thioformic and formic acids
G.A. Williams and J.N. Macdonald (Bangor, Gt. Britain) and J.E. Boggs (Austin, TX, U.S.A.) 321

Author index .....
Subject index .....